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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,950	09/08/2003	Victor Faybishenko		1733

7590 12/01/2005

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EXAMINER

MCKINNON, TERRELL L

ART UNIT PAPER NUMBER

3753

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,950

Applicant(s)

FAYBISHENKO ET AL.

Examiner

Terrell L. Mckinnon

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 11-19, 40-43 and 50-57 is/are rejected.
- 7) ☒ Claim(s) 5-10, 20-39, 44-49 and 58-75 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/8/2003.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 11-19, 40-43 and 50-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. (U.S. 6,365,063) in view of Kiesele et al. (U.S. 5,281,324).

Collins discloses a method and apparatus for controlling heat transfer conditions between a heat source and a heat-receiving object in a plasma reactor comprising:

- providing a heat-transfer interface device [Figs. (75), (1085), (1090) and (1140) which is in heat-transfer engagement with the source of heat and a heat-receiving object;
- the heat-transfer interface device comprising an elastomeric material filled with an electrically-nonconductive and thermally-conductive filler (column 21, lines 8-26);
- the heat-transfer interface device having a space that can be filled with the elastomeric material during redistribution thereof in the heat-transfer interface device under the effect of variations in the working temperature;

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- the heat-transfer interface device having one side facing the source of heat and another side facing said heat-receiving object;
- compressing the heat-transfer interface device with a compression force that displaces said elastomeric material into the space;
- the compression force having a magnitude that maintains said heat-transfer interface device in a compressed state and maintains the heat-transfer engagement at variations of the working temperatures;
- the heat-transfer interface device normally operates at working temperatures up to 320 degreesC;
- the heat-transfer interface device having a surface and wherein the space is selected from the group consisting of a space inside said elastomeric material and a space formed between said surface and one of the source of heat and the heat-receiving object;
- the filler material is selected from the group consisting of boron nitride, aluminum nitride, beryllium oxide, and carbon (column 21, lines 8-26);
- the filler material further comprises a combined mixing-assisting and compression-set reducing agent (column 10; lines 59-63).

Collins's invention discloses all of the claimed limitations from above except for the elastomeric material comprises perfluoroelastomer polymer; and the combined mixing-assisting and compression-set reducing agent is perfluoropolyether.

3. However, Kiesele teaches the use of a thermal interface material comprising perfluoropolyether (column 3, lines 64-68, and column 6, lines 35-38).

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Given the teachings of Kiesele, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the thermal interface material of Collins with the elastomeric material comprises perfluoroelastomer polymer; and the combined mixing-assisting and compression-set reducing agent is perfluoropolyether.

Doing so would provide an additive that will further enhance and stabilize the thermal interface material.

Allowable Subject Matter

4. Claims 5-10, 20-39, 44-49 and 58-75 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references cited on the USPTO 892 discloses related limitations of the applicant's claimed and disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell L. Mckinnon whose telephone number is 571-272-4797. The examiner can normally be reached on Monday -Thursday and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Blau can be reached on 571-272-4406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Terrell L McKinnon
Primary Examiner
Art Unit 3753
November 28, 2005